FERNO®

User and maintenance manual

Cortex Multi-Level self-loading stretcher

Rel. 20250225
English (UK)

Read this manual carefully and keep it for future reference

Ferno Technical Support

Customer Service and Technical Support are important aspects of every Ferno product. Before contacting us, note the serial number of the product and specify it in all written communications. For all queries concerning technical support, contact Ferno s.r.l.:

Telephone (toll-free for Italy)	800 501 711
Phone	0039 0516860028
E-mail	info.it@ferno.com

Ferno Customer Service

For assistance and further information, contact Ferno s.r.l.'s Customer Service:

MANUFACTURER

Ferno s.r.l., Via Benedetto Zallone 26
40066 - Pieve di Cento (BO) - ITALY

Telephone (toll-free for Italy)	800 501 711
Phone	0039 0516860028
Fax	(+39) 0516861508
Website	www.ferno.it

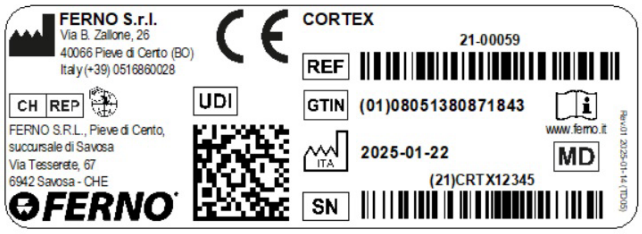
USER AND MAINTENANCE MANUAL

Further free copies of the instruction manual visit the website www.ferno.it

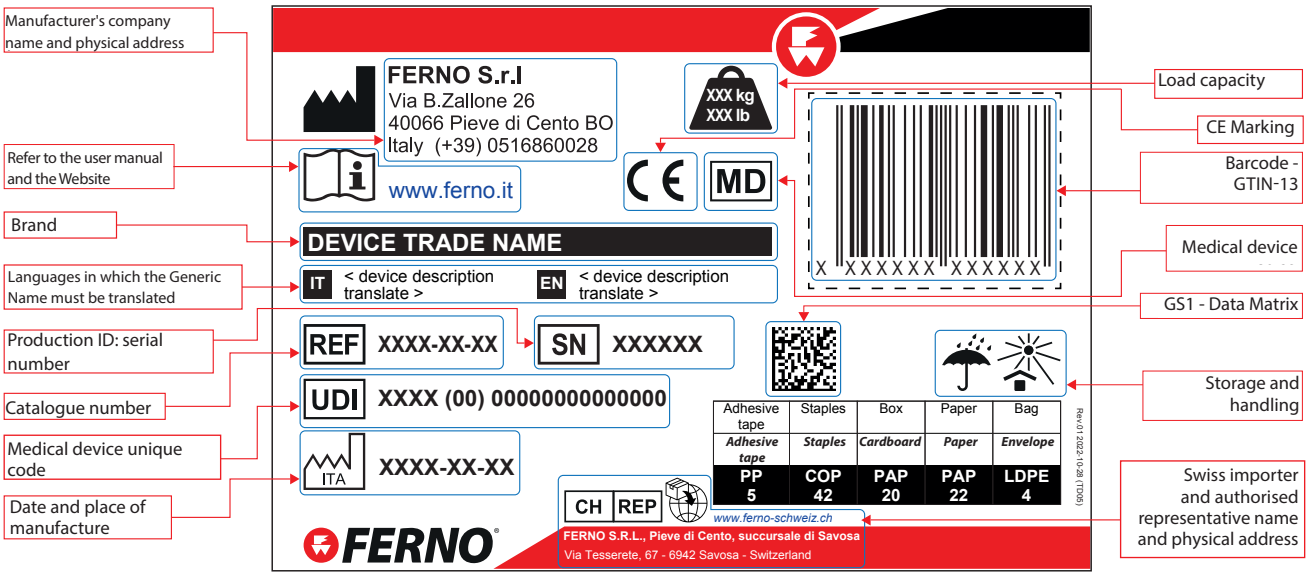
Identification label

Serial number Cortex _____

Placement: Main label on the foot end of the stretcher, on the cross tube under the anti-shock frame.



Product label



Product packaging label

Limitation of liability

This manual contains general instructions on the use and maintenance of the product. The instructions do not cover all possible applications and operations. The user is solely responsible for proper and safe use of the product. The safety information is provided as a service to the user and ensures only the minimum required level of safety to prevent injury to operators and patients. Any other safety measure implemented by the user must comply with applicable regulations. Before using the product, it is strongly recommended that staff be trained in its correct usage. Retain this manual for future reference. In case of change of ownership, ensure that the manual remains with the product. Additional free copies can be downloaded at www.ferno.it.

Intellectual property declaration

The information in this manual is the property of Ferno s.r.l. - Via Benedetto Zallone 26, 40066 Pieve di Cento (Bologna) Italy. All patent rights, design, construction, reproduction, use and sale rights relating to any item covered in this manual are the confidential and exclusive property of Ferno s.r.l., except for rights expressly transferred to third parties or not attributable to parties owned by the supplier. It is prohibited to reproduce this manual, either in full or in part, without the prior consent of Ferno s.r.l..

Limited warranty

Ferno products are covered by a 24-month warranty against manufacturing defects. For the full terms and conditions of warranty and liability, see chapter Warranty.

TABLE OF CONTENTS

Chapter/Section **Page**

1 - SAFETY INFORMATION

Read this user manual carefully. It is an integral part of the device and must always be stored close at hand. For your personal safety and for that of patients, please observe the following points:

- Before every use, make sure that there are no signs of wear, damage and/or malfunctioning. Refer to section *Inspection*.

- In order to avoid infections and/or bacterial contaminations, follow the indications in sections *Disinfection* and *Cleaning*.

1.1 Warning

The danger symbols draw attention to potentially dangerous situations that, if disregarded, may result in accidents, damage and/or injury.

⚠ WARNING

Untrained users may injure themselves, cause damage and/or physical harm. Allow only trained and qualified staff to use the Cortex stretcher.

The stretcher should be used by at least two duly trained and qualified operators. The stretcher is for professional use.

Improper use of the stretcher may cause damage and/or injury. Use the stretcher as described in this manual.

Unauthorised modifications of the stretcher could cause serious damage, injury and/or unforeseeable operating problems. Do not modify or alter the stretcher in any way.

Any damage to the components of the stretcher or to the entire system may affect its performance and safety. Inspect the stretcher frequently, especially before and after each use. Place the stretcher out of service if it shows signs of wear or damage.

An unassisted patient is at risk of injury. Never leave the patient alone while tied to the stretcher. Assist the patient throughout all rescue operations.

A patient who is not properly secured with the restraint system could fall and suffer injuries. Use safety restraints to secure the patient to the stretcher.

Any improper use of the restraints can cause the patient to fall and endanger their safety. Always use safety restraints correctly to secure the patient.

Occasional assistants may cause damage and/or physical harm, or injure themselves. Do not allow occasional assistants to carry out the preparation of the stretcher. Trained operators must supervise and direct use operations.

Improper maintenance may cause serious accidents and/or damage. Perform maintenance as instructed in this user manual.

The use of improper and/or unauthorised devices may cause accidents, damage, and/or injury. Use only devices that have been approved and authorised by Ferno s.r.l.

⚠ WARNING

Unauthorised repairs, and repairs carried out by technicians not authorised by Ferno s.r.l., will render all warranties null and void and may compromise the safety of the stretcher.

Non-original spare parts and inadequate repairs may cause damage and/or injury. We recommend using only original Ferno spare parts and refer exclusively to Ferno s.r.l.'s Customer Support.

1.2 Important

Boxes labelled "Important" contain important information on use and/or maintenance of the device.

Important

1.3 Blood-borne diseases

To reduce risks of exposure to infectious diseases that may be transmitted by blood, follow the instructions on disinfection and cleaning in this manual carefully.

1.4 Load capacity

Observe the load capacity of the stretcher. Refer to section *General specifications.*

1.5 Compatibility with locking systems

The Cortex stretcher is designed to be used with the Ferno SLAM locking system for ambulance transport. Ferno recommends using Ferno stretchers only with Ferno certified locking systems.

Any other configuration is not compatible with the specifications and instructions contained in this manual. Any combination of a Ferno stretcher or locking system with a non-Ferno stretcher or locking system represents improper use of the Ferno product. Ferno s.r.l. shall not be liable for any damage to users or third parties due to improper use of the Cortex stretcher.

1.6 Glossary of symbols

The symbols used in this manual and/or on the stretcher's labels are defined below. The CE mark is present on the stretcher and in this manual.

Danger: Risk of injury

Crushing point
Keep hands away

Read the user manual carefully

The stretcher requires at least two qualified operators for correct use

Do not wash with high pressure water

Unlocked

Locked

Do not lubricate

Lubricate

Crushing point

GS1 Data Matrix

Part number (abbreviated with PN, P/N, part no., or part #) unambiguously identifies a specific part of the design.

A catalogue number indicates the manufacturer's catalogue number in order to identify the medical device.

A serial number indicates the manufacturer's serial number in order to identify a specific medical device.

A lot code indicates the manufacturer's lot code in order to identify the lot.

Load capacity
(in kilos and pounds)

Medical device

This product meets European Union Standards.

Manufacturer

The Unique Device Identification Code (UDI) enables the clear identification of specific devices placed on the market and facilitates their traceability.

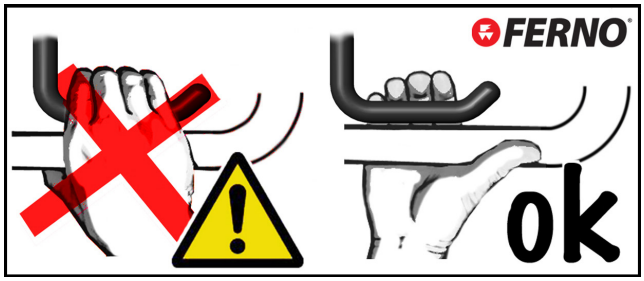
1.7 Information and safety labels

The information and safety labels contain important information that the user needs to know.

Read and follow the label instructions. Replace labels immediately if they are not legible. To obtain replacement labels, contact Ferno s.r.l.'s Customer Service. The labels shown below are attached to the stretcher.

Front leg control handle label positioning

Pinch Point label positioning



Label Front leg control handle:
Correct hand positioning and handle operation.

2- OPERATOR TRAINING AND SKILLS

2.1 Skills

Users who use the stretcher must:

- be trained in the correct use of the stretcher;
- Possess the skills required to assist the patient.

2.2 Training

Operators are required to:

- Carefully read and understand all information in this manual.
- Attend a suitable training course on the use of the stretcher.
- Practice with the stretcher before using it in real situations with patients.
- Log the training sessions. An example of a form for logging the training sessions can be found at the end of the manual.

⚠ WARNING

Untrained users may injure themselves, cause damage and/or physical harm. Allow only trained and qualified staff to use the stretcher.

Important

Operators must be able to ensure the safety of both themselves and their patients while using the stretcher. They must be able to determine the number of assistants required and to place them suitably to handle the patient according to the laws in force.

3 - THE STRETCHER

3.1 Description

The Cortex stretcher (simply referred to as "stretcher" in this manual) is a patient handling device for emergency situations and it was designed for transporting patients by ambulance. It can be transported safely thanks to the restraint system (for more information about the restraints see chapter *Accessories*).

The stretcher should be used by duly trained and qualified operators. The stretcher is for professional use by at least 2 qualified operators. It was designed to reduce the risk of back injury for healthcare professionals. Additional assistance may be required to handle heavy patients and/or when the situation demands it, and should always be provided according to local healthcare regulations.

The stretcher must be used exclusively with Ferno locking systems for ambulances (for more information on locking systems, see chapter *Accessories*).

3.2 CE Marking

Ferno's products meet the general safety and performance requirements of Regulation (EU) 2017/745 (MDR) concerning medical devices.

For further details: www.ferno.it

⚠ WARNING

Untrained users may injure themselves, cause damage and/or physical harm. Allow only trained and qualified staff to use the stretcher.

⚠ WARNING

Improper use of the stretcher may cause damage and/or injury. Use the stretcher as described in this manual.

⚠ WARNING

The use of improper and/or non-certified devices may cause accidents, damage, and/or injury. Use only medical devices that have been approved and authorised by Ferno s.r.l.

3.3 Reporting accidents

In the event of a serious accident in relation to the device, immediately contact Ferno S.r.l. and the competent authority of the member state in which the user has its main office.

E-mail: eu-regulatory.it@ferno.com

Phone +39 051 6860028

Fax +39 0518681508

3.4 Components of the stretcher

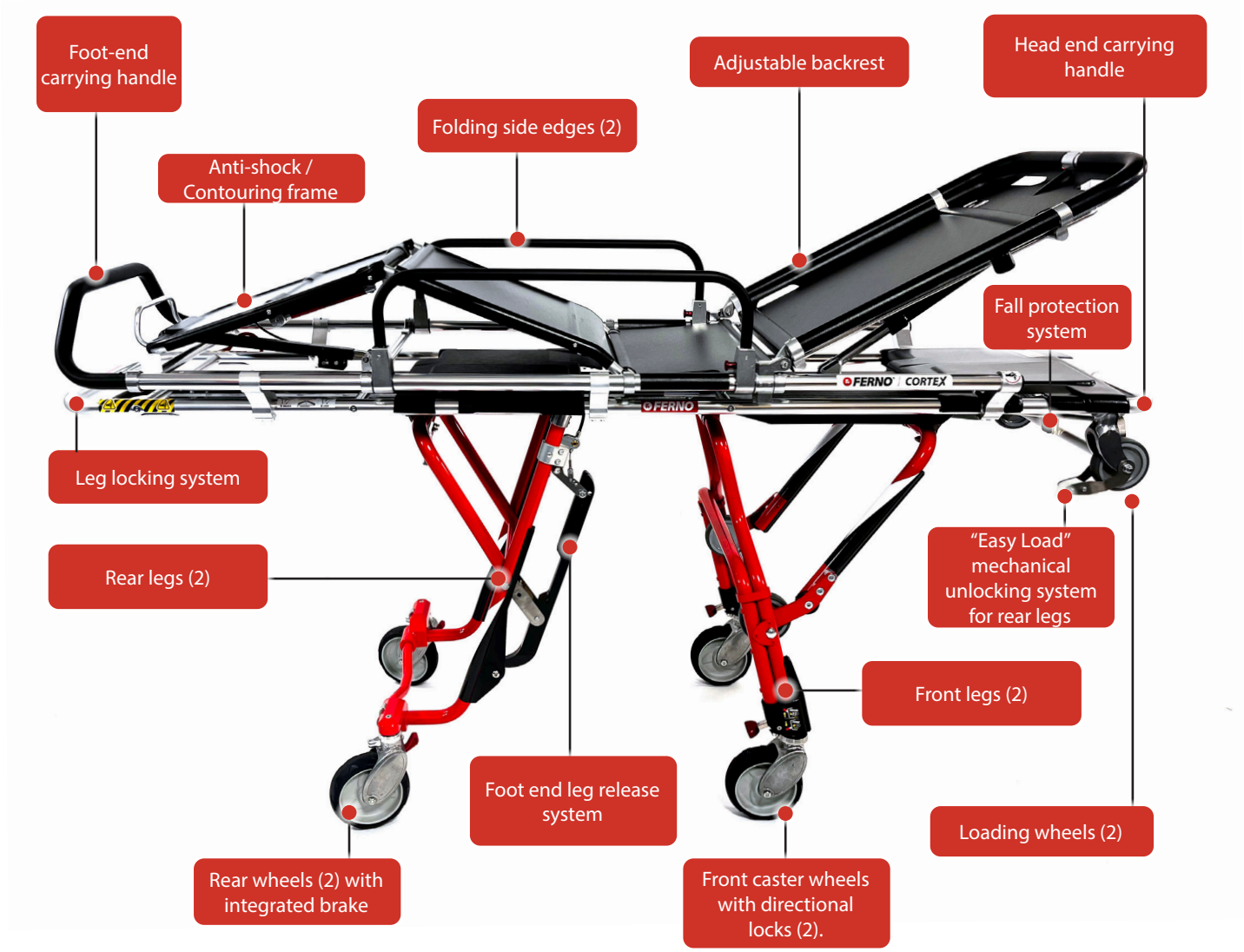
- Head end carrying handle
- Front leg adjustment handle
- Rear leg adjustment handle
- Loading wheels
- Backrest adjustment lever
- Adjustable backrest
- Front legs
- Rear legs
- Front caster wheels, diameter 150 mm, with directional locks
- Rear caster wheels, diameter 150 mm, equipped with braking system
- Folding side edges
- “Easy Load” mechanical unlocking system for rear legs
- Anti-shock / contour foot end frame
- Leg locking system
- Foot end carrying handle

Important

The Cortex stretcher is sold without mattress and restraints. For references about the device accessories, see chapter *Accessories*.

FOOT END

HEAD END



MAX
250 kg
551 lb

Load capacity
(in kilos and pounds)

Never exceed the load capacity of the stretcher. Inspect the stretcher if the load capacity has been exceeded (see section *Inspection*).

USER AND MAINTENANCE MANUAL

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3.5 General specifications

Ferno reserves the right to update the manuals without notice. For further details, please contact Ferno's Customer Service. Dimensions are rounded up to the nearest whole number. A tolerance of about 5 mm should be considered for the measures.

Specifications		
Load capacity	551 lbs	250 kg
Weight[1]	104 lbs	47 kg
Height		
Maximum height with lowered backrest	41 in	1033 mm
Maximum height with backrest raised at 80°	61 in	1560 mm
Stretcher loading height[2]		
Mod. CORTEX	28/29 in	720/740 mm
Length		
Total	77.5 in	1970 mm
Width		
Total	22 in	560 mm
Width with fitted Extender Kit for ScoopEXL		
Total	38 in	970 mm
Wheels		
Diameter	6 in	150 mm
Width	2 in	44 mm
Materials		
Structure	aluminium	
Panels	ABS	

[1] The stretcher's weight does not include accessories, mattress and restraints.

[2] Ground clearance required for the stretcher to be safely loaded and unloaded, always pay attention to the instructions in chapter *Use of the stretcher*.

⚠ WARNING

The use of the Cortex stretcher is not recommended on inclined loading platforms.
If the stretcher is to be used on this type of platform, please contact Ferno Customer Service before installing the locking device.

3.6 Stretcher positions

Position 1: ground position

Position 2

Position 3

Position 4

Position 5: maximum height

4 - COMPONENTS OF THE STRETCHER

4.1 Leg control handle

The stretcher has two independent control handles, one for the front and one for the rear legs. The front leg control handle is positioned at the head end (Figure 1); the rear leg control handle is positioned at the foot end (Figure 2).

The head end handle unlocks the front legs; the foot end handle unlocks the rear legs. Both can be used independently to adjust the height of the stretcher.

To lift or lower the stretcher, the operators stand one at the head end and one at the foot end, lifting or lowering the stretcher one step at a time.

When the stretcher is fully closed, to lift it, the head end operator must operate the control handle to unlock the legs. Once the 1st step has been reached, the lever can be released and the lifting can be continued by simply gripping the frame with the palms facing upwards, thanks to the "step by step" system that allows the stretcher to be lifted to the loading height without the use of levers, thus limiting operator fatigue.

For the head end only, the operator must hold the handle and release it when the first step has been reached. On the foot end, on the other hand, it is sufficient to hold the stretcher and lift it without the aid of the handle.

When operating both or only one of the two control handles, operators should pay close attention, maintain control of the stretcher and coordinate.

At the head end there is a label indicating correct hand positioning and operation of the front leg control handle. The same hand positioning must also be kept for the foot end of the stretcher.

Figure 1 - Front leg control handle

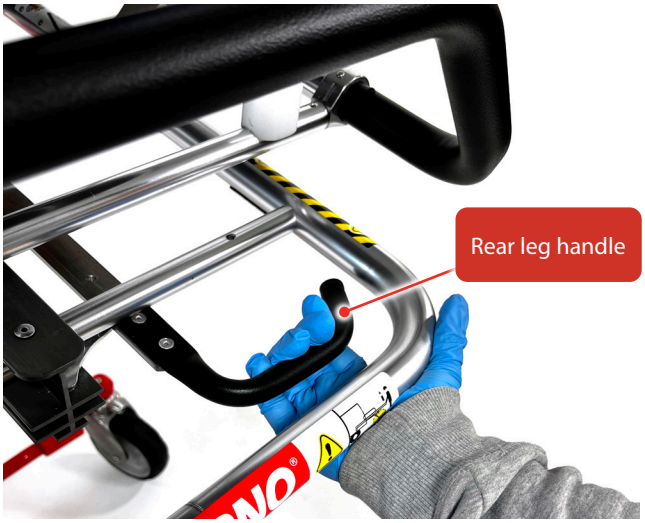
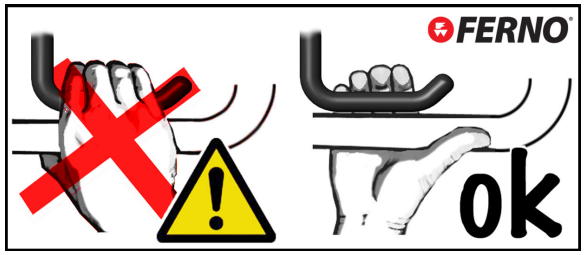


Figure 2 - Rear leg control handle



Label Front leg control handle

4.2 Carrying handle

The stretcher is equipped with a carrying handle at its foot end (Figure 3). The operator at the foot end can use the carrying handle to guide and move the stretcher.

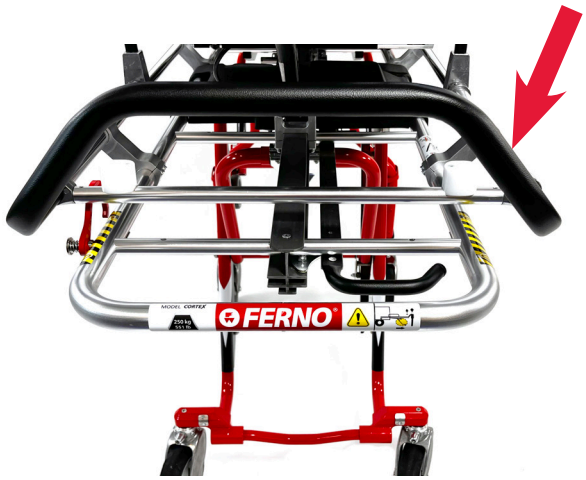


Figure 3 - (Foot-end) carrying handle

4.3 "Easy Load" mechanical unlocking system for front legs

The stretcher is equipped with a mechanical "Easy Load" leg unlocking system (Figure 4).

During loading, when the front wheels are on the ambulance loading surface, the "Easy Load" unlocking system is activated.

This pressure on the "Easy Load" system unlocks the front legs, allowing easy loading.

The system allows for easy loading of the stretcher without over-exerting the operator's back.

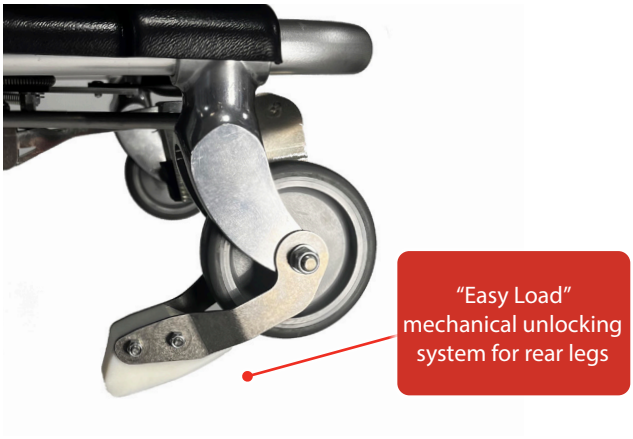


Figure 4 - Front leg unlocking rod

4.4 Mechanical unlocking system for rear legs

The mechanical unlocking system for rear legs is activated automatically when loading the stretcher into the ambulance, the moment the legs on the foot end are pushed against the bumper of the vehicle. During this operation, the unlocking system is pressed against the leg, thus freeing it to allow loading.

No action is required of the operator, other than simply pushing the stretcher into the vehicle.

Figure 5 - Mechanical unlocking system for rear legs

4.5 Fall protection system

The fall protection system (Figure 6) prevents the stretcher from accidentally falling to the ground if the front legs are not fully opened during the final stage of unloading. If the stretcher is not removed under the safe conditions described in this manual, the safety system activates the SLAM locking system and stops the stretcher, preventing it from falling.

For more information, see section *Fall protection system.*

Figure 6 - Fall protection system

4.6 Backrest

The stretcher's backrest can be adjusted up to 80° (Figure 7B). The operator can lift or lower the backrest with the specific red unlocking lever.

⚠ WARNING

Support the backrest while operating the unlocking lever.

- **TO LIFT THE BACKREST:** Press the lever (Figure 7A) (towards the centre of the frame) to unlock the backrest and apply pressure to the backrest to lift it to the desired position. Release the lever and lift the backrest slightly to lock it in the desired position.
- **TO LOWER THE BACKREST:** Press the lever (Figure 7A) (towards the centre of the frame) to unlock the backrest and apply pressure to the backrest to lower it to the desired position. Release the lever and lower the backrest slightly to lock it in the desired position.

Figure 7 - A: Unlocking lever activation

Figure 7 - B: Lifting the backrest

4.7 Side edges

The stretcher is equipped with folding edges on both sides. The operator can lift or lower the edges using the relevant unlocking pin (Figure 8A).

- **TO LOWER THE SIDE EDGES:** Pull the knob of the unlocking pin (Figure 8B) and turn the edges downwards. Release the knob to lock the edges in position.
- **TO LIFT THE SIDE EDGES:** Pull the knob of the unlocking pin and turn the edges upwards. Release the knob to lock the edges in position.

Figure 8 - A: Folding side edge unlocking pin
B: Unlocking movement to lift or lower the side edges
C: Rotation movement of the side edges

Important

Do not use the side edges to lift the stretcher (Figure 9A). The edges are not suitable for lifting the stretcher. **Lift the stretcher by holding the main frame** (Figure 9B).

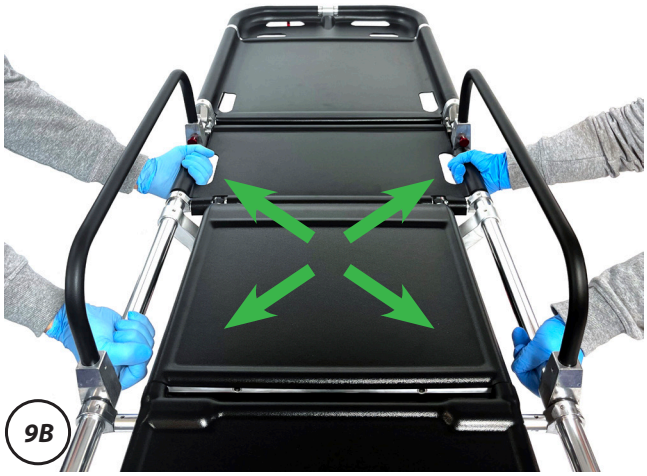


Figure 9 - A: WRONG stretcher lifting
B: CORRECT stretcher lifting by the main frame

4.8 Foot end frame

In addition to the normal lying position, the foot end frame can be positioned in two further configurations:

- Anti-shock position (Trendelenburg position)
- Antalgic position (Contour position)

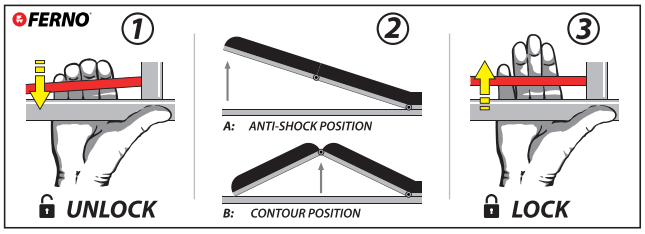


Figure 10 - Working on the foot end frame lever

4.8.1 Anti-shock position (Trendelenburg)

If required, the foot end frame can be placed in an anti-shock position, otherwise known as Trendelenburg position (legs raised).

TO LIFT THE FRAME IN ANTI-SHOCK POSITION

1. Stand at the patient's left side, near the foot end frame, where the red lever is located.
2. If necessary, loosen the tibial and femoral restraints.
3. Pull the lever with your right hand and simultaneously with your left hand lift the end of the frame using the suitable handle, until the required position is reached.
4. While continuing to support the frame with your left hand, release the red lever until you hear a “clack”.
5. Before releasing your left hand grip on the frame, check that the frame is correctly locked in place.

TO LOWER THE FRAME

1. Stand at the patient's left side, near the foot end frame, where the red lever is located.
2. If necessary, loosen the tibial and femoral restraints.
3. Support the end of the frame with your left hand using the suitable handle.
4. While continuing to support the frame with your left hand, pull the red lever to unlock the frame.
5. Once the lever is released, guide the frame downwards.

Figure 11 - A: Lift the anti-shock frame
Figure 11 - B: Lower the anti-shock frame

⚠ WARNING

When the stretcher is not fixed inside the ambulance, it is necessary for the second operator to stand at the head end to support the stretcher during the positioning of the foot end frame in the anti-shock or antalgic position.

4.8.2 Antalgic Position (Contour)

If necessary, the foot end frame can be placed in an antalgic position, otherwise known as a contour.

TO LIFT THE FRAME IN ANTALGIC POSITION

1. Stand at the patient's left side, near the foot end frame, where the red lever is located.
2. If necessary, loosen the tibial and femoral restraints.
3. Place your left hand on the end of the foot end frame and pull the red lever with your right hand.
4. Lift the frame with your right hand while continuing to pull the lever and push the end of the frame towards the centre of the stretcher with your left hand, as shown.
5. While continuing to hold the frame in place, release the lever, ensuring that it remains locked in the antalgic position.

TO LOWER THE FRAME

1. Stand at the patient's left side, near the foot end frame, where the red lever is located.
2. If necessary, loosen the tibial and femoral restraints.
3. Hold the end of the frame with your left hand and pull the lever while supporting the frame's weight.
4. Bring the frame into a horizontal position with both hands, supporting its weight throughout the movement.
5. Release the lever.

4.9 Wheels

The stretcher is equipped with four 150-mm diameter solid wheels. The wheels on the head end can be unlocked when required, by operating the levers located at each wheel. The foot end caster wheels are provided with an integrated braking system (section *Integrated braking system*).

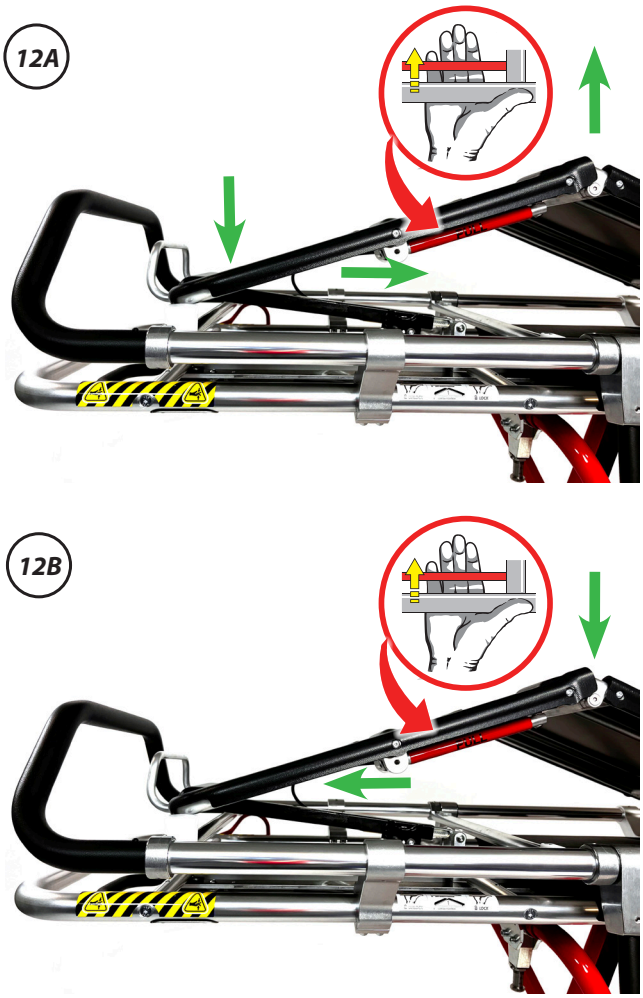


Figure 12 - A: Lifting the frame in contour position
Figure 12 - B: Lowering from the contour position

Important

Only lock the stretcher when it is not moving; do not use the brakes as braking devices during movements.

⚠ WARNING

Use the wheel brakes to help keep the stretcher stationary when it is on an uneven surface.

4.10 Integrated braking system

The brakes prevent any accidental movement and displacement of the stretcher and are located on each foot end wheel, which can be easily identified by the operator thanks to the presence of the locking lever. In order to lock or unlock the rear wheels:

- **TO LOCK THE WHEELS:** Push the locking lever on the rear wheels downwards with the foot.
- **TO UNLOCK THE WHEELS:** Push the locking lever on the rear wheels upwards with the foot.

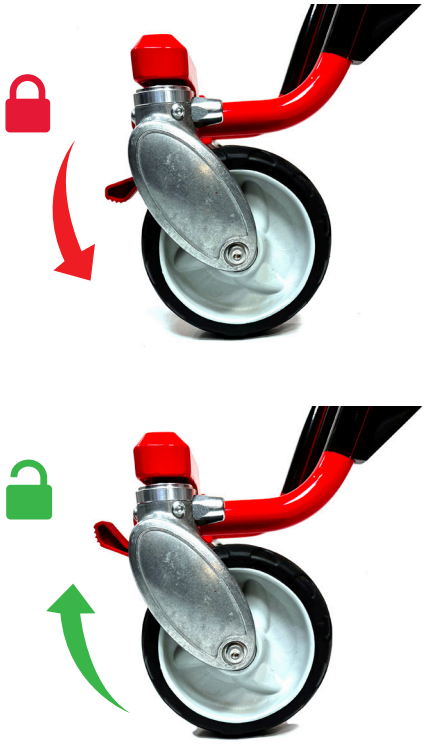


Figure 13: Rear wheel locking

4.11 Caster wheels

The loading-side wheels can be used in fixed or swivel mode.

TO UNLOCK THE CASTER WHEELS: Pull up the red lever at each wheel on the head end with your foot. It is necessary to perform the operation from both sides to make the wheels on the head end swivel and thus move the stretcher sideways.

TO LOCK THE CASTER WHEELS: Lower the red lever located at each wheel on the head side with your foot. It is necessary to perform the operation from both sides and push the stretcher until the wheels lock back into the standard position.

⚠ WARNING

During the loading phase, the wheels at the head end must be in a fixed position to allow the 10G pin to engage.

Figure 14: Front caster wheels vs. front fixed wheels

4.12 Leg locking system

The stretcher is equipped with a "leg locking system" located on the rear leg on the patient's right side (Figure 15).

The leg locking system allows the front and rear legs to be kept in the "fully closed" position (section *Stretcher positions)*, in order to lift and transport the stretcher like a litter.

For front legs, the leg locking system is automatic and is activated automatically when the stretcher is fully closed (section *Stretcher positions*).

⚠ WARNING

For the rear legs, the leg locking system must be activated by the operator. Be careful when unloading the stretcher: if it is operated, the rear legs will not open.

To lock the front and rear legs, close the respective leg locks (Figure 15A).

To unlock the front and rear legs, proceed as follows:

1. With the stretcher on the ground, open the leg lock at the foot end (Figure 15B), placing it in the open position.

2. Grasping the stretcher's main frame, operate the head end leg unlocking lever.

3. Lift the stretcher by holding the lever up to position 1 (section *Stretcher positions*).

4. Check that the legs have been extended as far as they need to be and that they are locked.

⚠ WARNING

Using the stretcher as a "litter" could endanger the operators' safety, always consider the help of assistants.

Figure 15A: Engaged leg locking hook

Figure 15B: Released leg locking hook

5 - USE OF THE STRETCHER

5.1 Before putting the stretcher into service

Staff using the stretcher must have carefully read and understood the information contained in this manual. Before any operation with the stretcher, ensure that:

- All components (restraints, mattress, etc.) are present, that the stretcher does not show any signs of damage or wear, and that it is fully operational. Refer to section *Inspection*.
- The vehicle is equipped with a Ferno locking system compatible with Cortex stretchers.

5.2 Instructions for use

- This manual does not provide any medical instructions.
- It is the responsibility of the operators to follow correct procedures and ensure the safety of both the patient and themselves.
- This manual explains the use of the stretcher under ideal conditions and is purely indicative.
- The stretcher should be used by duly trained and qualified operators.
- These operators must work together and coordinate correctly during all operations.
- Follow procedures while complying with official regulations for moving the patient in an emergency.
- Lift only the weight that you can safely support. Obtain additional assistance for heavy loads.
- Always follow the local healthcare instructions and protocols, except when they contradict this manual.
- Always assist the patient and never leave them alone during the operations with the stretcher.
- When changing the height of the stretcher or unloading it from the ambulance, check that legs are correctly opened before releasing your hold on the main frame.

Important

During the loading phase, operators must not support the load of the stretcher and the patient, it is sufficient to push the stretcher into the ambulance.

The entire loading is carried out without bearing any weight.

⚠ WARNING

Improper use of the stretcher may cause damage and/or injury. Use the stretcher as described in this manual.

⚠ WARNING

Never leave the patient alone while tied to the stretcher. Assist the patient throughout all operations with the stretcher. Two operators are required.

Read the user manual carefully

Use with a minimum of two qualified operators

Load capacity

⚠ WARNING

The use of improper or unauthorised devices may cause accidents, damage, and/or injury. Use only devices that have been approved and authorised by Ferno s.r.l.

⚠ WARNING

Any improper use of the restraints can cause the patient to fall and endanger their safety. Always use the original Ferno s.r.l. stretcher safety restraints.

Important

When lifting or lowering the stretcher, always make sure that it is correctly locked at the desired height before loosen your hold on the frame.

5.3 Lifting and lowering

To lift or lower the stretcher, use the control handles on the front legs and those on the rear legs, respectively, positioned at the head and foot ends of the stretcher. Lifting and lowering operations must be carried out by at least two duly trained and qualified operators.

TO LIFT THE STRETCHER

1. Operators must ensure they can support the weight of stretcher and patient when lifting and lowering the stretcher.
2. **Operator at head end:** stand at the head end of the stretcher. This gives you control of the stretcher's front legs. Lift by holding the frame bar with palms facing up while pressing and holding the control handle long enough to pass the first click.
3. **Operator at foot end:** stand at the foot end of the stretcher. This gives you control of the stretcher's rear legs. Lift it by holding its frame bar with the palms facing up. In this case, it is not necessary to operate the lever.
4. **Both operators**: always support the stretcher. Once at the decided loading height, check that the legs are in the correct position. Only then let go of the frame.

TO LOWER THE STRETCHER

Both operators:

1. Stand at the head and foot ends of the stretcher in order to have total control of the stretcher.
2. Hold the frame bar with the palms facing up and activate the control handles while supporting the weight.
3. Operate the control handles and lower the stretcher with coordinate movements to the desired height.
4. While keeping the device under control, release the handles and make sure it is properly locked at the desired height.

Important

The two operators can place themselves at the ends of the stretcher and lift it "step by step", in this way they will share the overall weight and avoid collateral damage.

Do so until reaching the loading height

Figure 16 - Operators' positions to lift and lower the stretcher

5.4 One-man operation with stretcher without patient

LOWERING TO THE GROUND

When the stretcher is not carrying a patient or an incubator, a single operator can adjust the height or lower the stretcher to the ground.

To lift the stretcher, first operate one end then the other.

To lower the stretcher, operate the leg control handle and lower the transport system to the desired position, then move to the other end of the stretcher and repeat the operation.

If there is equipment on the transport system, lift or lower the transport system in steps, adjusting the height one or two positions at a time. This will prevent objects from falling off the transport system.

5.5 Loading and unloading

Before loading or unloading procedures, the two operators must be prepared to support the weight. Ensure that all safety restraints are properly applied at all times and that the operators are in position.

To load or unload the stretcher, proceed as follows:

TO LOAD THE STRETCHER

Transport the stretcher in front of the ambulance loading platform, making sure it is properly aligned.

⚠ WARNING

When loading and unloading the stretcher, you must always support the weight by holding the frame with your palms facing upwards. An incorrect grip can cause damage and/or injury to the patient and/or operator.

1. **Operator at head end**: Stand next to the stretcher and assist the foot end operator during the "centring on the loading surface" phase. (Figure 17).

2. **Operator at foot end**: Move to the foot end of the stretcher and push the latter into the vehicle, making sure that the loading wheels rest on the platform. Proceed with loading by pushing the stretcher until the foot end leg bumpers touch the platform.

3. **Foot end and head end operator**: Operators must coordinate with each other to complete the loading of the stretcher into the ambulance by pushing simultaneously to reduce any spinal distress.

4. Once the stretcher is loaded, ensure that the SLAM locking system is properly engaged before proceeding with transport.

Important

For heavy loads, during loading, after the loading wheels have been placed on the platform, the two operators push the stretcher until the front legs are completely closed.

Only then can they both stand on the foot end and push simultaneously.

The same position must also be used when unloading the stretcher.

After being certain that the rear leg has also opened correctly, the second operator returns to the central position and ensures that the front leg is fully opened.

Figure 17 - Operators' positions to load the stretcher

Figure 18 - Loading and/or unloading the stretcher

Figure 19 - Loading and/or unloading the stretcher

TO UNLOAD THE STRETCHER

1. **Operator at foot end:** Push the release button on the SLAM locking system while releasing the stretcher by pulling it outwards, with the palm of the right hand facing upwards to support the device.
2. **Operator at foot end**: Hold the frame with both hands, palms facing up, and start pulling the stretcher out of the ambulance.
3. **Operator at head end**: Stand at the side of the stretcher and hold the central bar with the palms facing up to assist the foot-end operator.
4. **Both operators:** Make sure that the rear legs open completely and rest on the floor. Simultaneous unloading is recommended to reduce any spinal distress.
5. **Operator at head end**: Check that the front legs have enough space to open completely.
6. **Both operators:** Every time the stretcher is unloaded, ensure that both leg pairs are completely open and locked before the loading wheels leave the ambulance floor.
7. **Operator at foot end:** When both legs are open and locked in their normal transport position, pull the stretcher out of the ambulance.
8. **Operator at foot end**: To complete the unloading operation, coordinate with the head-end operator while both keep holding the stretcher.

Important

During any transport, loading and/or unloading of bariatric patients, the assistance of other trained operators is recommended. This allows reducing the effort. For additional help, refer to section "*Additional assistance*".

⚠ WARNING

Any improper use of the restraints can cause the patient to fall and endanger their safety. Always use the safety restraints.

5.6 Transfer

In order to transfer the patient on the stretcher, proceed as follows:

1. Position the stretcher next to the patient and adjust its height (to lift or lower the stretcher, refer to section "*Lifting and lowering*") at the same level as the patient.

2. Push the brake levers with the foot to lock the rear wheels (to lock the rear wheels, see section *Integrated braking system*).

3. Lower the side edges of the stretcher (to lift and lower the edges refer to section *Side edges*).

4. Unfasten the restraints.

5. Transfer the patient on the stretcher.

6. Fasten safety restraints and adjust them without creating any constriction.

7. Raise the side edges.

5.7 Transport

Before any transport operation, make sure that: safety restraints are fastened, side edges are lifted and locked (if the Scoop Extender is not being used for bariatric patient transport) and the patient is properly secured to the stretcher.

Move the stretcher carefully, if possible on smooth surfaces.

In order to transport the stretcher, proceed as follows:

1. Fasten safety restraints and adjust them without creating any constriction for the patient.
2. Ensure that the side edges are raised (if the Scoop Extender is not used for bariatric transport) and locked in place.
3. Release the brake levers on the rear wheels and for better control of the stretcher set the head end wheels so that they do not swivel.
4. Operator at foot end: hold the stretcher frame or the carrying handle and move the patient.
5. Operator at head end: assist the foot-end operator in keeping the stretcher under control and check the path.

In case of obstacles, such as a door threshold, lift the stretcher slightly, pull it or push it so that the wheels can get past the hindrance.

Avoid high obstacles, like steps. If a high obstacle must be overcome or in case of difficulty, ask for additional help, if necessary, to lift and carry the stretcher (see section *Additional assistance*).

5.8 Transport with Scoop Extender

It is possible to equip the stretcher with a kit that allows its surface to be extended through the use of a ScoopEXL (not included in the kit).

The kit consists of four clamps with an attachment for TSL, two on the right and two on the left side of the stretcher, and two lateral load-bearing supports for side edges.

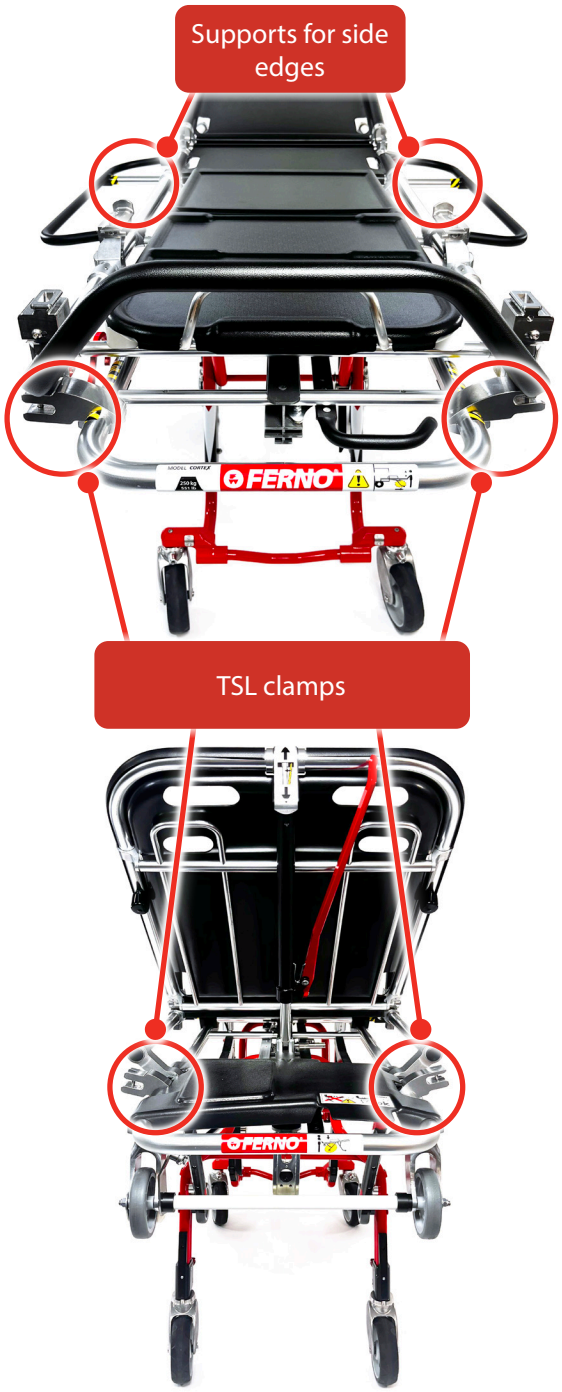


Figure 20 - Components of the Extender Kit for ScoopEXL

Figure 21 - Application to the ScoopEXL

Important

When using the Cortex stretcher with the Scoop Extender Kit, it is important that the patient restraints are mounted on the stretcher frame as usual and that they run inside the Scoop and not outside to ensure proper securing of the patient to the stretcher and thus the patient's safety in case of hard braking, acceleration and/or accidents.

⚠ WARNING

The Scoop Extender kit is an accessory that must be ordered at the time of purchase in order for the attachment clamps and side edge supports to be fitted.
If you already have a Cortex stretcher without this accessory, please contact Ferno's Technical Service Department for assembly of the components required to use the extended board.
The Scoop Extender kit can only be mounted on the stretcher during production, or by an authorised Ferno technician.

INSTALLATION OF THE SCOOPEXL TO THE EXTENDER KIT

To use the stretcher with the Scoop Extender extended board, the following steps must be followed:

- Ensure that the stretcher is equipped with the components required to use the ScoopEXL as an extended board.
- Raise the backrest by at least one position.
- Raise the side edges to a fully upright position.
- Pull out the two side supports, positioned approximately halfway up the stretcher.

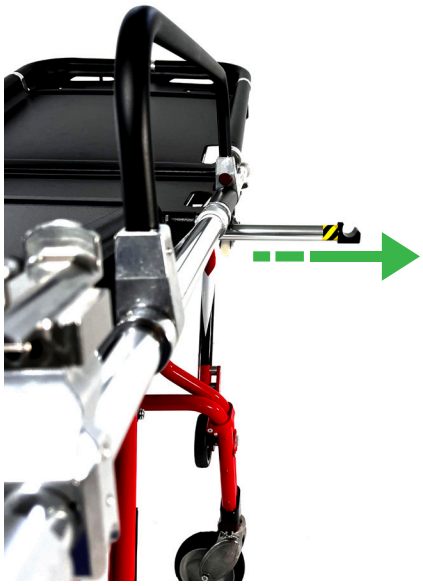


Figure 22 - Pulling out the lateral supports

- Open the side edges, making sure that the ends of each rail rests in the recess of the corresponding support that has just been removed.

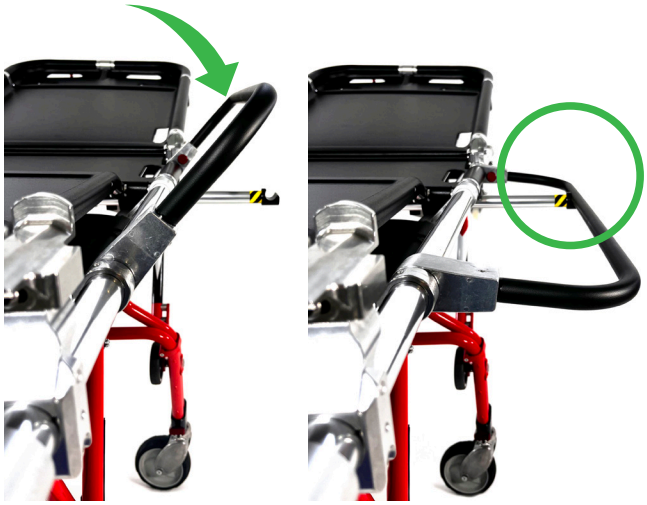


Figure 23 - Fastening of side edges on supports

- Ensure that the ScoopEXL stretcher is locked in the shortest position and separate its longitudinal halves.
- Turn the ScoopEXL so that the Ferno logos are facing downwards.
- Once this position has been achieved, place the longitudinal stretcher halves on the side edges so that the head end of the ScoopEXL is at the foot end of the Cortex stretcher and secure the two halves to the clamps using the TSL latch, as shown in the photo.

Figure 24 - Fastening the ScoopEXL in the clamps of the Extender Kit

Important

Ensure that the ScoopEXL stretcher is mounted so that the “head” part of the ScoopEXL is at the foot end of the Cortex stretcher to ensure adequate support for the lower limbs.

⚠ WARNING

It is not possible to install the ScoopEXL as a wide board by positioning it with the logos facing upwards.

⚠ WARNING

The Scoop Extender kit is only compatible with the Cortex stretcher, so it cannot be retrofitted to different Ferno stretcher models.

APPLICATION OF THE RESTRAINT EXTENSIONS

In order to allow even the most corpulent patients to be properly secured to the device, it is possible to attach 3 quick-release restraint extensions that can be purchased as accessories in addition to the Scoop Extender Kit.

The extensions are the same as those in the ScoopEXL TSL Expander Kit.

Installation of the extensions on the stretcher must be carried out as follows:

- an extension on the lower section of the four-point restraint;
- an extension on the femoral restraint;
- an extension on the tibial restraint.

Important

Attach the extension to the four-point restraint in order to keep the shoulder straps in the correct position and the restraint release mechanism in the middle position. It is therefore recommended that the extension be attached to the shorter restraint flap.

Figure 25 - Application of the restraint extensions in case of a bariatric patient

SCOOP REMOVAL

To remove the extended board, follow the steps below:

- release both longitudinal stretcher halves from their clamps by pushing the button of the TSL system as during the usual opening of the ScoopEXL.
- Remove the ScoopEXL and store it separately.
- Raise the side edges.
- Reinsert the two side supports and lower the side edges if necessary.

Figure 26 - Disengaging the ScoopEXL from the clamps of the Extender Kit

5.9 Installation and preparation for use

CHARACTERISTICS OF THE LOADING SURFACE

For optimal operation of the stretcher, the following dimensions are suggested for the loading surface and the relative position of the SLAM-5026/MONDIAL locking system. (Please refer to the special manual of the locking system for mounting the locking system on the ambulance).

Loading height: 720/740 mm

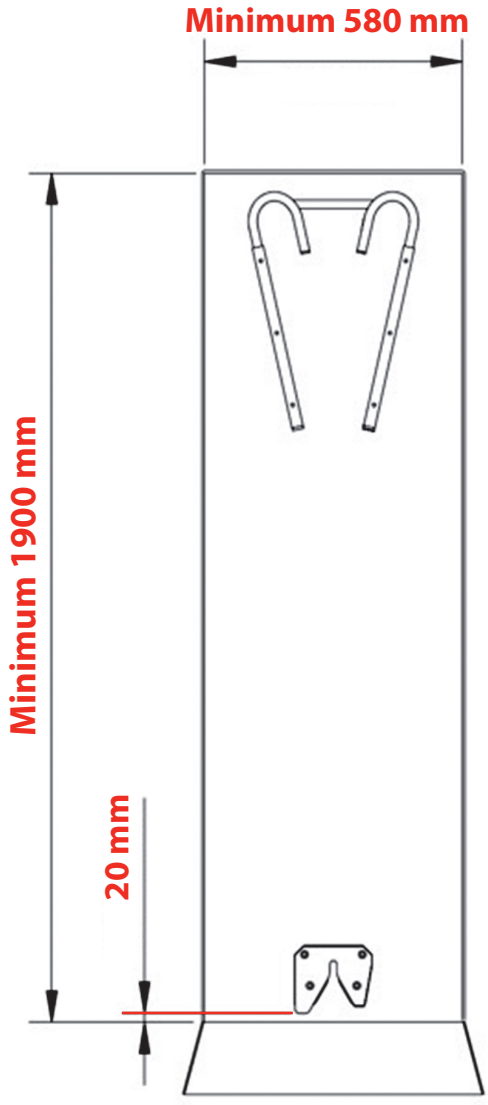


Figure 27: Suggested installation dimensions

Important

Unloading and loading with the patient on board must always be performed by two trained and correctly positioned operators (see chapter *Loading and unloading*).

The locking device must be positioned in relation to the vehicle bumper in such a way that the fall protection system can function correctly (see chapter *Fall protection system*).

During the unloading phase it is necessary to ensure that the height of the loading platform allows for the correct opening of the legs on the head end: when the stretcher is still resting with the loading wheels on the loading platform but the legs on the head end have already been completely unloaded, it is necessary to ensure that there is a gap of at least 2 cm between the front wheels and the ground (making sure that this measurement is taken on a flat surface) in order to allow for the correct opening of the legs on the head end and the consequent unlocking of the fall protection system (Figure 28).

⚠ WARNING

The use of the Cortex stretcher is not recommended on inclined loading platforms.
If the stretcher is to be used on this type of platform, please contact Ferno Customer Service before installing the locking device.

If the device is to be used on a vehicle with a sloping platform and/or adjustable shock absorbers, check with your outfitter during the initial test that the final loading height of the stretcher is within the parameters indicated by Ferno and that all the instructions in this manual and in the manual for the locking device to be installed on the platform are respected.

The height of the platform must be within the parameters required by the manual during the device entire loading/unloading phase.

If the stretcher with the Extender Kit accessory is to be used for transporting corpulent patients, it is necessary to ensure that the clamp is installed at a sufficient distance from the side wall to allow loading and unloading of the stretcher with the extended board.
A possible alternative is to install a movable loading platform, taking care to position it so that the Extender Kit can be used.

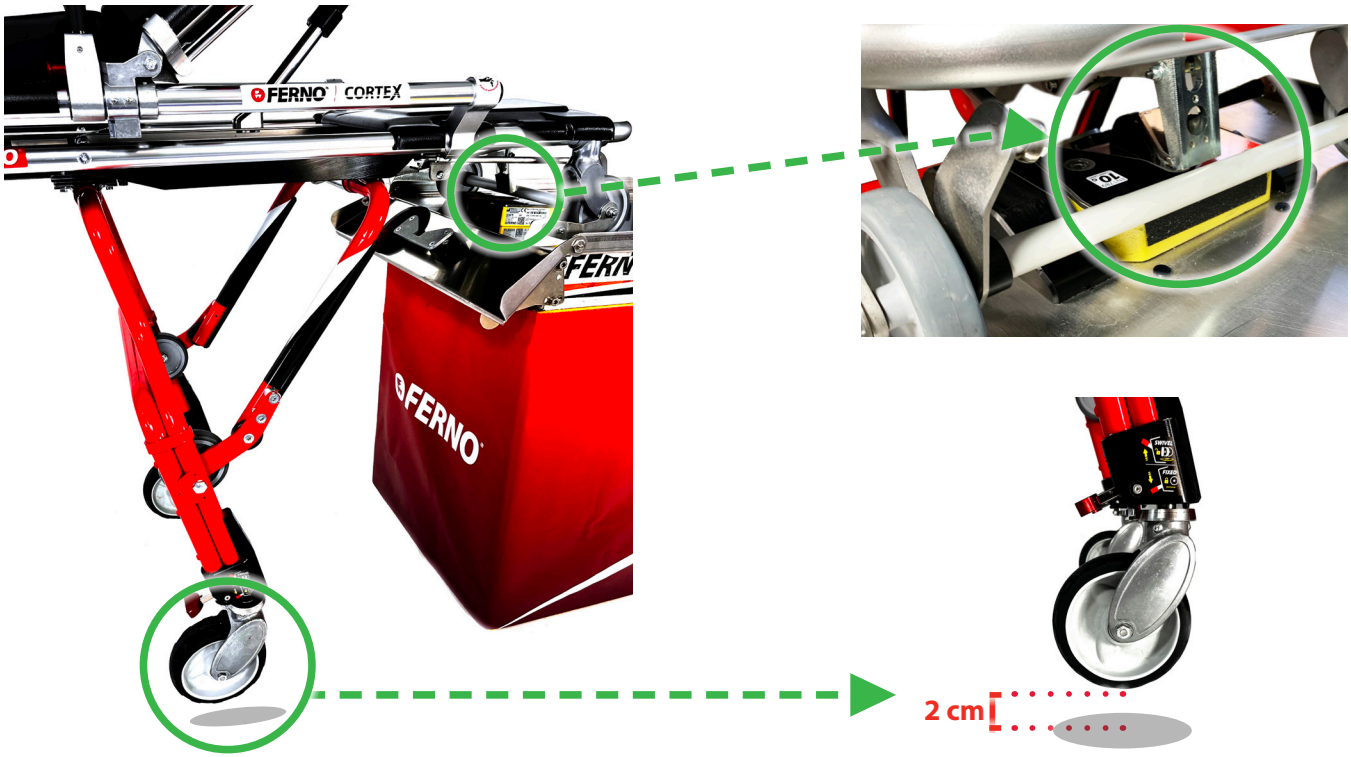


Figure 28 - Correct head end leg opening space

5.10 Fall protection system

The fall protection system prevents the stretcher from accidentally falling to the ground if the front legs do not open fully during unloading.

If the stretcher is not removed under the safe conditions described in this manual (see Section *Transport*), the safety system intercepts the SLAM and stops the stretcher, preventing it from falling (Figure 29A and 29B).

⚠ WARNING

When loading and unloading the stretcher, always ensure that the rear legs are at the highest height to ensure correct and safe use.

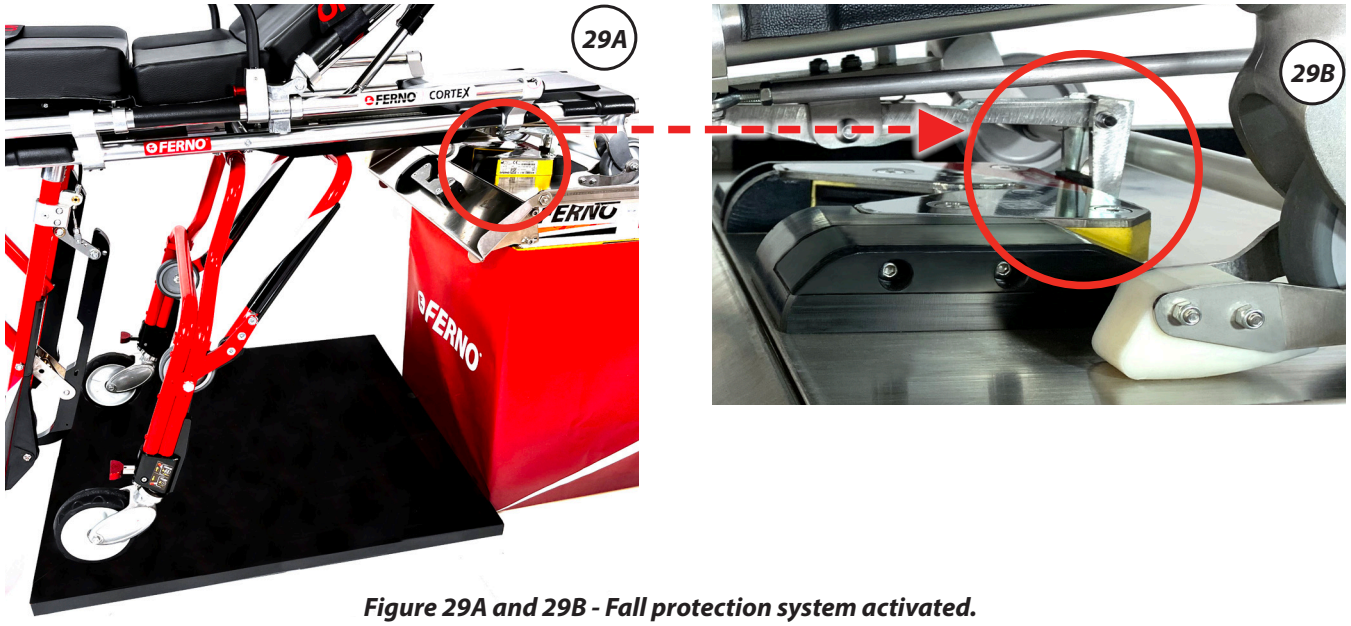


Figure 29A and 29B - Fall protection system activated.

A further safety system provides an additional leg-locking position if the stretcher has been unloaded but the front legs have not fully opened.

In this case, if the fall protection system has not been correctly activated, if the front legs are not tilted too far, the front legs will not close but the stretcher will lock in the aforementioned position, allowing the stretcher operator to return to safety (Figure 30).

Should this situation occur, the operator at the foot end of the stretcher should apply downward pressure to counterbalance the weight of the stretcher and the patient. The second operator, on the other hand, should immediately stand at the head end and lift the stretcher to allow the front legs to open fully.

Figure 30 - Front leg safety position

⚠ WARNING

The presence of the fall protection system and the additional safety position do not exempt the operator from implementing all the precautions described in section *Loading and Unloading*. Always follow all instructions described in this manual.

⚠ WARNING

An unassisted patient is at risk of injury. Never leave the patient alone, always assist him/her during all operations.

5.11 Additional help

The stretcher requires at least two qualified operators for correct use with patient. These operators may need additional help for lifting heavy loads (patient and equipment).

- The operators place themselves at the head and foot of the stretcher, maintain control of the situation and give directions to the assistants.
- Sometimes the assistants at the sides of the stretcher may have to walk sideways. Follow local healthcare protocols.

The illustrations below show the positioning of operators and any assistants.

Important

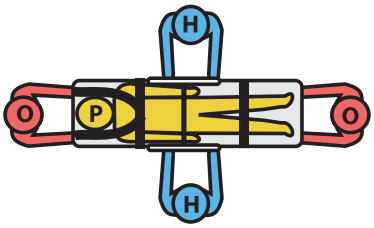
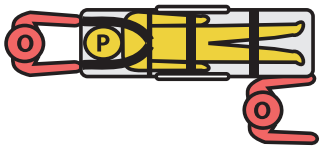
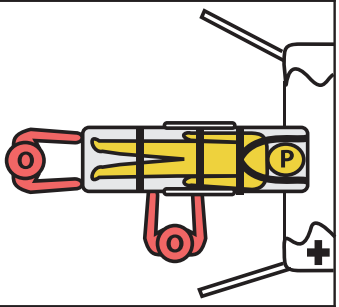
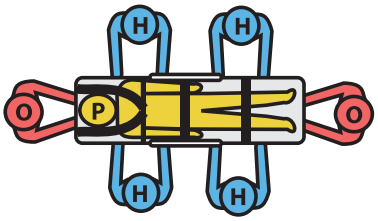
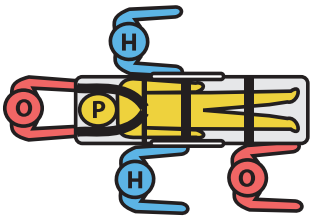
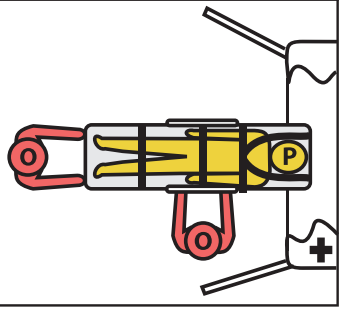
For heavy loads, after positioning the loading wheels on the platform and pushing the stretcher onto the loading surface safely, the two operators can both stand at the foot end and push simultaneously.

The same procedure applies for unloading.

After simultaneously unloading the rear legs and ensuring that they have properly opened and locked into position, it is important that one operator returns to the central position and checks that the front leg is fully opened.

⚠ WARNING

Transport the stretcher so that the patient can see where he/she is being transported.

Assistants	Lifting	Carrying	Loading / Unloading
Two Assistants			
Four Assistants			

Legend: O = Operator, H = Assistant, P = Patient

6 - CONFIGURATION OF MATTRESS AND SAFETY RESTRAINTS

6.1 5-section mattress with cushion

The product requires a special mattress for correct use, which is not supplied as standard with the stretcher but can be purchased separately. The mattress is sold inclusive of head cushion.

Figure 31 - Mattress components

BEFORE USING THE MATTRESS

Before using the mattress, it must be attached to the stretcher using the Velcro system on the back.

Figure 32 - Mattress Velcro application sequence

To secure the mattress to the device, place it on the stretcher so that it is perfectly centred on the support frame and, without moving the backrest frame, lift the first two sections of the mattress while holding the adjacent block in place, at the pelvis, as shown in the photo.

Figure 33 - Adhesive Velcro under the mattress

Remove the adhesive film from the Velcro, reposition the mattress in a horizontal position, making sure it is well centred, and press lightly on the frame to stick the Velcro correctly.

Figure 34 - Velcro application of the head end mattress

Once the upper section has been glued, repeat the operation first for the second last (femoral) section and only then for the foot section.

Figure 35 - Velcro application of the foot end mattress

INSTALLING THE CUSHION

Raise the backrest slightly for easier access to the rear of the frame.

Place the cushion on the section of the mattress with the Ferno inscription, so that the straps are facing upwards.

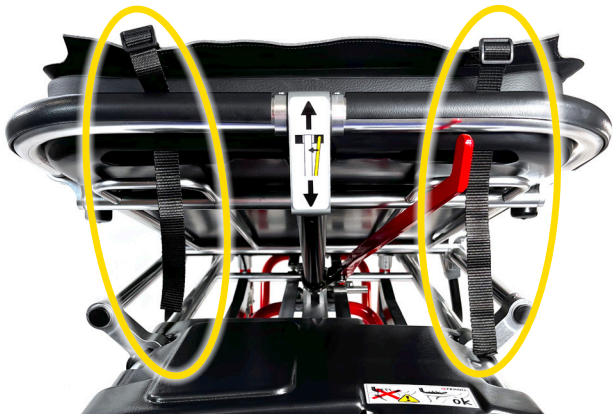
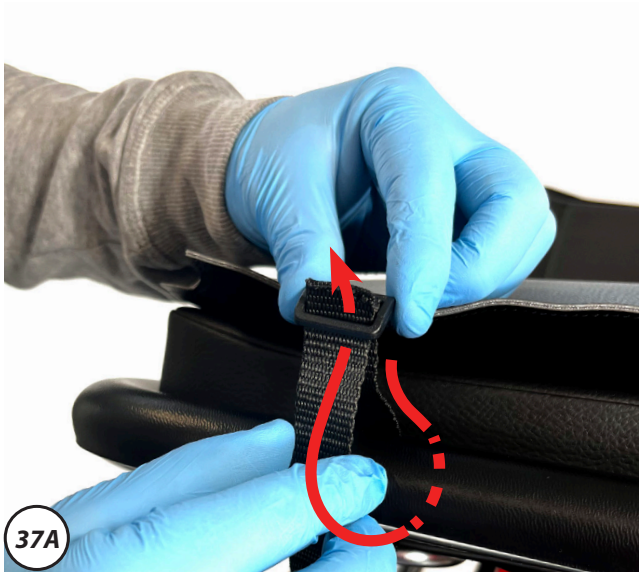


Figure 36 - Passing the straps through the stretcher slots

Pass each of the straps through the slots at the top of the backrest panel and wrap the tube with it so that it returns upwards and passes inside the black buckle, as shown in the figure.



To fasten the cushion properly, as last step of the sequence, make the strap pass inside the buckle itself, as shown in the photo.

Figure 37 - Installing the cushion

6.2 Restraints application onto the stretcher

The product requires special restraints for correct use, which are not supplied as standard with the stretcher. Ferno recommends the use of the stretcher with three restraints: a “four-point” chest restraint and two “two-point” restraints for legs and feet.

Figure 38 - Cortex stretcher restraints

Keep the restraints fastened when not in use, to prevent them from interfering with device operations.

Before using the stretcher, check that all restraints are undamaged and free from imperfections.
The following paragraphs describe how to use restraints.

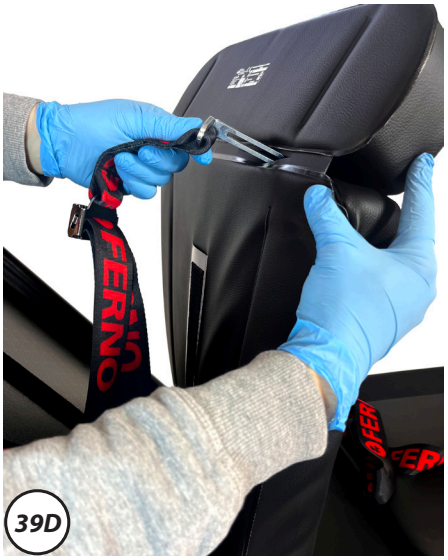
FITTING THE 4-POINT RESTRAINTS (code 0313915):

Unfasten the restraint and divide it into its four parts.

2. To attach the four-point restraint, lift the stretcher's backrest and pass the loop of each shoulder strap under the supporting crossbar next to the special slot on the ABS surface. (Figure 39A).

Important

Always position the half of the restraints with the red button on the left side of the patient (operator side on the ambulance) so that it can be safely adjusted while seated.



3. Insert the buckle into the loop (Figure 39B) and pass the buckle first through the slot in the ABS surface, and then through the slot in the mattress (if the mattress is not suitable, it must be replaced for the restraints to function correctly).

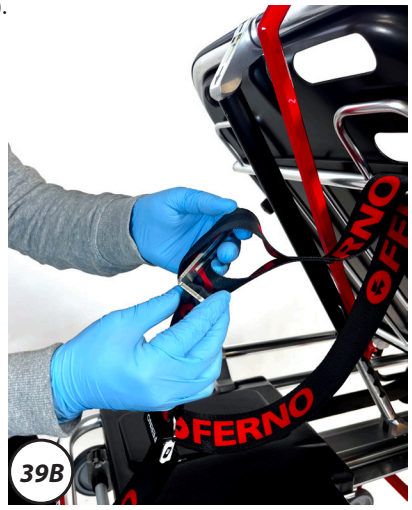


Figure 38 - Installing the shoulder straps

3. To install the lower half of the 4-point restraint, wrap the loop-shaped end around the chosen anchor point on the frame of the stretcher.

Pass the buckle through the loop and repeat the operation on the other side of the device (Figures 40A-D).

4. Close the 4-point restraint (Figure 40E).

Figure 40 - Installing the lower section of the four-point restraint

⚠ WARNING

Applying improper or unsuitable devices to the stretcher may result in injury. Use only restraints by Ferno.

⚠ WARNING

An unassisted patient is at risk of injury. Never leave the patient alone, and always assist the patient when using the device.

⚠ WARNING

A patient that is not secured or properly secured to the stretcher may fall and suffer injuries. Always secure the patient to the stretcher with a suitable restraint system.

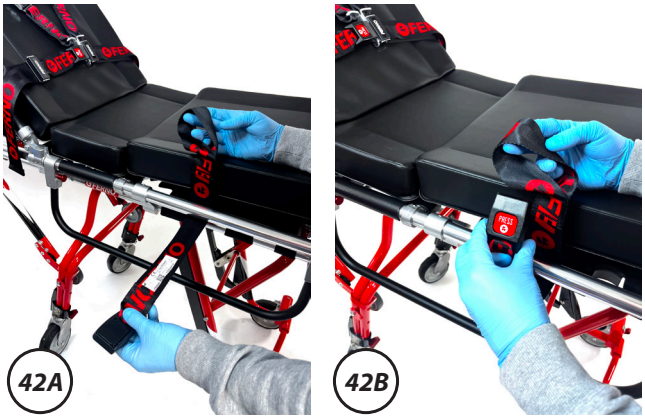
FITTING THE 2-PIECE RESTRAINTS (part no. 430-2-N):

1. Unfasten the restraint and divide it into two parts. The femoral restraint must be placed under the side edge, in the part of the frame that allows it to have greater extension, so that it can be positioned precisely on patients of different builds.

Figure 41 - Installing the lower section of the four-point restraint

2. Tie the end of the restraint in a noose around the chosen anchor point, always on the main frame of the stretcher.

3. Pass the buckle through the loop and repeat the operation on the other side of the stretcher (Figure 42).



⚠ WARNING

Use only restraints by Ferno.

Figure 41 - Installing the femoral restraint

4. The “feet” restraint must be positioned exactly as the first one, but near the last central welding joint of the frame, next to control levers and carrying handle.

Figure 43 - Positioning the foot restraint

7 - USE OF RESTRAINTS

TO FASTEN THE 4-POINT RESTRAINT TO THE PATIENT (0313915):

1. Position the shoulder straps and arrange them so that they are in contact with the shoulders of the patient. The connections must be centred on their chest or abdomen.

2. To fasten the restraint, slide the metal tab in the "L"-shaped connections, then insert and lock it into the buckle (Figure 44).

3. Always check that the restraint is correctly fastened and adjust its length (Figure 44).

Figure 44 - Closure and adjustment of the four-point restraint

TO UNFASTEN THE RESTRAINT:

1. Press the red unlocking button in the middle of the buckle. (Figure 45).

2. Pull the tab out of the connections.

Figure 45 - Four-point restraint opening

TO LENGTHEN THE RESTRAINT:

Hold the adjuster, rotate it until it is perpendicular to the restraint and pull it in the opposite direction to the anchor point until reaching the desired length. (Figure 46).

TO TIGHTEN THE RESTRAINT:

Hold the restraint end and pull it through the sliding tab until reaching the desired length (Figure 47).

Figure 46 - Loosening the restraint

Figure 47 - Tightening the restraint

8 - MEDICAL EQUIPMENT FIXING

If equipment for a trauma patient or other medical devices are transported, they must be fixed to the stretcher safely and correctly, in order to prevent them from endangering the safety of operators and patient.

Follow the instructions of the manufacturer to secure such devices.

Figure 48 - Securing the ScoopEXL stretcher to the Cortex

9 - MAINTENANCE

9.1 Routine and preventive maintenance

The stretcher is a medical device requiring regular maintenance, hence you are recommended to comply with the following schedule:

Periodic maintenance: the stretcher has to be subjected to a yearly maintenance operation by Ferno qualified technicians.

Preventive checks: preventive maintenance operations are to be carried out by the user, as specified in the table below.

Intervals of Preventive inspection	After each use	Whenever necessary	Every month
Disinfection	•	•	
Cleaning		•	•
Inspection	•	•	•
Lubrication		•	

If the device undergoes particularly heavy use, checks should preferably be carried out on a more frequent basis. If there are signs of wear and damage, discontinue use of the device and immediately contact Ferno's Technical Support Service.

Ferno directly carries out repair maintenance operations, without the need of dealers, mechanics or external service centres. You are thus invited to be wary of those who present themselves as Ferno's authorised technician.

9.2 Disinfection

1. After each use, clean the surfaces of the stretcher with a non-abrasive surface disinfectant.

2. Do not immerse the stretcher directly in disinfectant.

3. During disinfection, ensure there are no signs of wear and/or damage.

4. Dry with a cloth. Ensure all the components of the device are completely dry before reusing them.

It is advisable to wear suitable gloves (e.g. household or disposable gloves) during disinfection.

DISINFECTING THE DEVICE

1) Remove restraints, mattress and any other accessory from the product.

2) Disinfect all equipment (including accessories such as cushions, restraints, etc.) with a cloth or sponge dampened with disinfectant solution, let it sit for 10-20 minutes. Use brushes to rub and clean the least accessible parts.

3) Wipe with a cloth to rinse and dry the treated surfaces, make sure that all the device components are completely dry before using them.

4) After cleaning, be sure to replace on the device the restraints and/or any other accessory that was removed.

Warning: during disinfection, use gloves and the appropriate PPE according to the risk assessment guide.

Also ensure there are no signs of wear and/or damage.

⚠ WARNING

Disinfectants and detergents containing phenols (if above the threshold of 2500 ppm), chlorine (bleach) and/or iodine-based solutions can cause damage. Do not use products containing these chemicals.

9.3 Cleaning

To ensure optimal use of the stretcher, it is important to keep all the components in good conditions and to remove all traces of dirt, debris and body fluids.

1. Remove the restraints and the mattress.

2. Wash all components of the product with a cloth or sponge dampened with detergent solution.

3. If necessary, remove stains with a stiff bristle brush (not metal), or a light solvent, paying attention to the labels.

4. Use a cloth to rinse and dry the treated surfaces, make sure that all the device's components are completely dry before using them.

5. After cleaning, be sure to replace on the device the restraints and any other accessory that was removed after cleaning and disinfecting them.

Warning: during disinfection, use gloves and the appropriate PPE according to the risk assessment guide.

Also ensure there are no signs of wear and/or damage.

CLEANING RESTRAINTS WITH METAL BUCKLES

The sanitisation of restraints must be carried out at the end of the shift or after each transport, if necessary.

When there is no contamination from organic substances, it is possible to just disinfect the restraint by directly spraying it with disinfectant and leaving it to dry. In case of surfaces visibly contaminated by organic substances proceed with decontamination according to the following procedure:

1. Wear suitable PPE based on the Risk Assessment Document.

2. Remove the material using a disposable cloth and/or paper and dispose of it in the specific container for special waste.

3. Before starting the sanitisation, remove the restraints from the device and stretch them to their maximum length.

4. Sanitisation is carried out by immersing the restraints in a container and leaving them to soak in water with sanitising product, leaving the metal and plastic part outside the container. Leave to soak for approx. 5-20 minutes then dry with paper. If the buckle needs more thorough cleaning, it can be washed with mild soap and water, taking care to rinse it well, ensuring that it does not soak for more than 5 minutes.

5. Afterwards hook up all hooks together and hang the restraints to a support. If the buckles have also been mistakenly soaked, make sure the restraint dries as quickly as possible to ensure its longevity.

6. Re-fit the restraints only once they are dry.

⚠ WARNING

Never wash restraints with metal buckles in a washing machine and/or tumble dryer.

⚠ WARNING

Improper maintenance may cause serious accidents and/or damage. Perform maintenance as instructed in this user manual.

CLEANING RESTRAINTS WITH PLASTIC BUCKLES

1. Remove the restraints from the product.

2. Place the restraints inside a mesh bag (not supplied with the products) and put it in the washing machine.

3. Wash the restraints with hot water using a cleaning and disinfecting product and selecting a cycle for delicate items, with slow spin. Do not bleach.

4. Remove the restraints from the mesh bag and let them dry in the open air. Do not tumble dry.

5. Re-fit the restraints only once they are dry.

CLEANING THE MATTRESS

Disinfect the mattress with a specific disinfectant, according to the manufacturer's instructions.

To clean the mattress:

1. Wash the mattress with lukewarm water and mild soap using a soft cloth.

2. Rinse the mattress with clean water.

3. Dry the mattress with a clean cloth. Do not use the washing machine and/or tumble dryer.

4. Re-fit the restraints only once they are dry.

Important

When not in use, store the stretcher in an indoor environment that is dry and protected from direct sunlight.

Important

The use of products containing chlorine, phenols and iodine may harm the stretcher. Do not use products containing these agents for stretcher cleaning/ disinfection.

Important

After disinfection/cleaning, ensure that the stretcher and its components are completely dry before use.

Important

DO NOT WASH WITH HIGH PRESSURE WATER

Do not use high pressure water to clean the stretcher.

9.4 Inspection

The stretcher must be inspected before and after use and must be cleaned after each use. When not in use, it must be stored in a dry, indoor environment and inspected at least once a month.

The stretcher should be inspected regularly by maintenance personnel. Carry out the checks listed in this section.

CHECKLIST FOR INSPECTION OF THE STRETCHER

- Are all the components present?
- Are all screws, nuts, bolts, rivets and spring pins correctly and firmly positioned?
- Do all mobile parts move normally and correctly?
- Does the stretcher have any worn or damaged parts?
- Do the foot end wheels turn correctly?
- Does the braking system of the rear wheels work properly?
- Can the wheels on the head end be made swivelling and fixed correctly?
- Do the loading wheels show signs of wear?
- Does every leg pair close correctly?
- Does the anti-shock frame work properly?
- Can the antalgic position (contour position) be set correctly?
- Does the backrest work properly?
- Does the fall-protection system work properly?
- Do the leg locking systems (front and rear) work properly?
- Do front and rear control handles work correctly?
- Are restraints and mattress in good conditions? Do they show cuts or worn edges?
- Do restraint buckles show visible damage? Do they work correctly?
- Is the ambulance equipped with a Ferno locking system?
- Does the locking system engage on the stretcher correctly?
- Are the loading and unloading of the stretcher smooth and safe?
- Do installed accessories work properly without interfering with the operation of the stretcher?

If signs of wear or damage are found during inspection, discontinue use of the stretcher and immediately contact Ferno's Technical Support Service for repairs or maintenance. See chapter "*Technical Support*".

9.5 Lubrication

Clean and disinfect the stretcher before lubrication. Use specific lubricants. Do not lubricate the points with the "do not lubricate" symbol.

Do not lubricate

Lubricate

Important

Unrequired lubrication may damage components that must not be lubricated, because dirt and foreign particles could build up. **Only** lubricate the points indicated in this manual using the lubricants specified for each point.

POINTS TO LUBRICATE

Apply a small amount of lubricant using the lubricant indicated for each point. Lubricate the same points on both sides of the stretcher.

- Backrest hinges: lubricate with silicone spray or petroleum jelly spray
- Perforated backrest flute: lubricate with petroleum jelly spray
- Folding side edge unlocking pin: lubricate with petroleum jelly spray
- Piston sliding bars: lubricate with silicone spray
- Anti-fall swivelling pin: lubricate with silicone spray

POINTS NOT TO BE LUBRICATED

Backrest flute coupling	Do not lubricate
Side edge clamps	Do not lubricate
Fall arrest hook	Do not lubricate

Important

LUBRICATION POINTS: LOWER PART

Only lubricate the points indicated in this manual using the lubricants specified for each point.

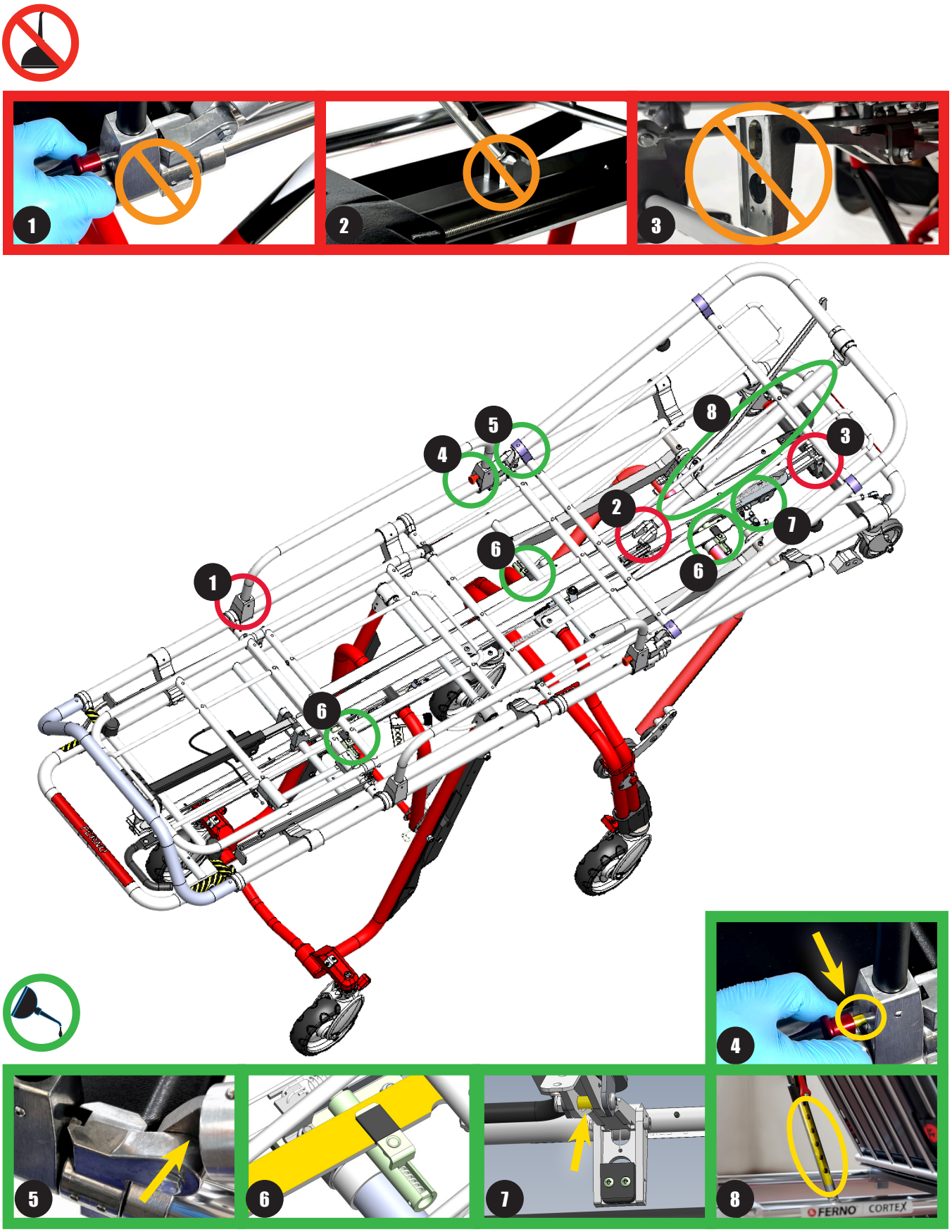


Figure 49 - Lubrication elements

10 - ACCESSORIES

Ferno offers a full range of emergency medical service accessories. For their correct use, follow the instructions provided with the product. Store the instructions together with this manual. When using the accessories, pay attention to any additional factors, such as height and width of doors, etc.

For further information, contact Ferno's Customer Service or dealer.

10.1 Products and accessories

Codes may vary, check them during the purchase.

4-point restraint	(0313915)
2-piece restraint	(430-2-N)
5-section mattress with cushion	(25-00200)
Safe Transfer Super Comfort mattress	(271029000)
Adapter kit for PACRAC+	(25-00214)
PAC RAC+	(FWEPR+IT)
IV Pole	(0087156)
Extender Kit for ScoopEXL	(25-00213)
Adjustable 61 cm extension	(0313659-IT)
Yellow ScoopEXL kit	(KIT-SCOOPEXL)
Red ScoopEXL kit	(21-00038)
Emergency kit	(21-00026)
ITC (incubator fixing interface)	(ITC-HL)
SLAM locking	(SLAM-5026/MONDIAL)
Neomate	(0314116)
Pedimate Plus	(0314115)
Patient Shield	(0822097)

5-section mattress with cushion

Safe Transfer Super Comfort mattress

Adapter kit for PACRAC

PACRAC+

4-point restraints

2-piece restraint

IV Pole

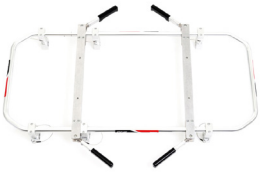
Extender kit for ScoopEXL

Adjustable 61 cm extension with quick-release metal buckle

Complete YELLOW ScoopEXL kit

Complete ScoopEXL kit RED

Emergency Kit



ITC

SLAM locking

Pedimate Plus

Neomate

Patient Shield

⚠ WARNING

The use of improper and/or unauthorised devices may cause accidents, damage, and/or injury. Use only devices that have been approved and authorised by Ferno.

11 - LIST OF SPARE PARTS

Spare part code	Spare part description	Quantity
10-0237-001	ABS panel, head end	1
10-0238-001	ABS panel, central	1
10-00547	ABS panel, femoral	1
10-00546	ABS panel, feet	1
10-1599-001	Upper ABS casing for 5126 series	2

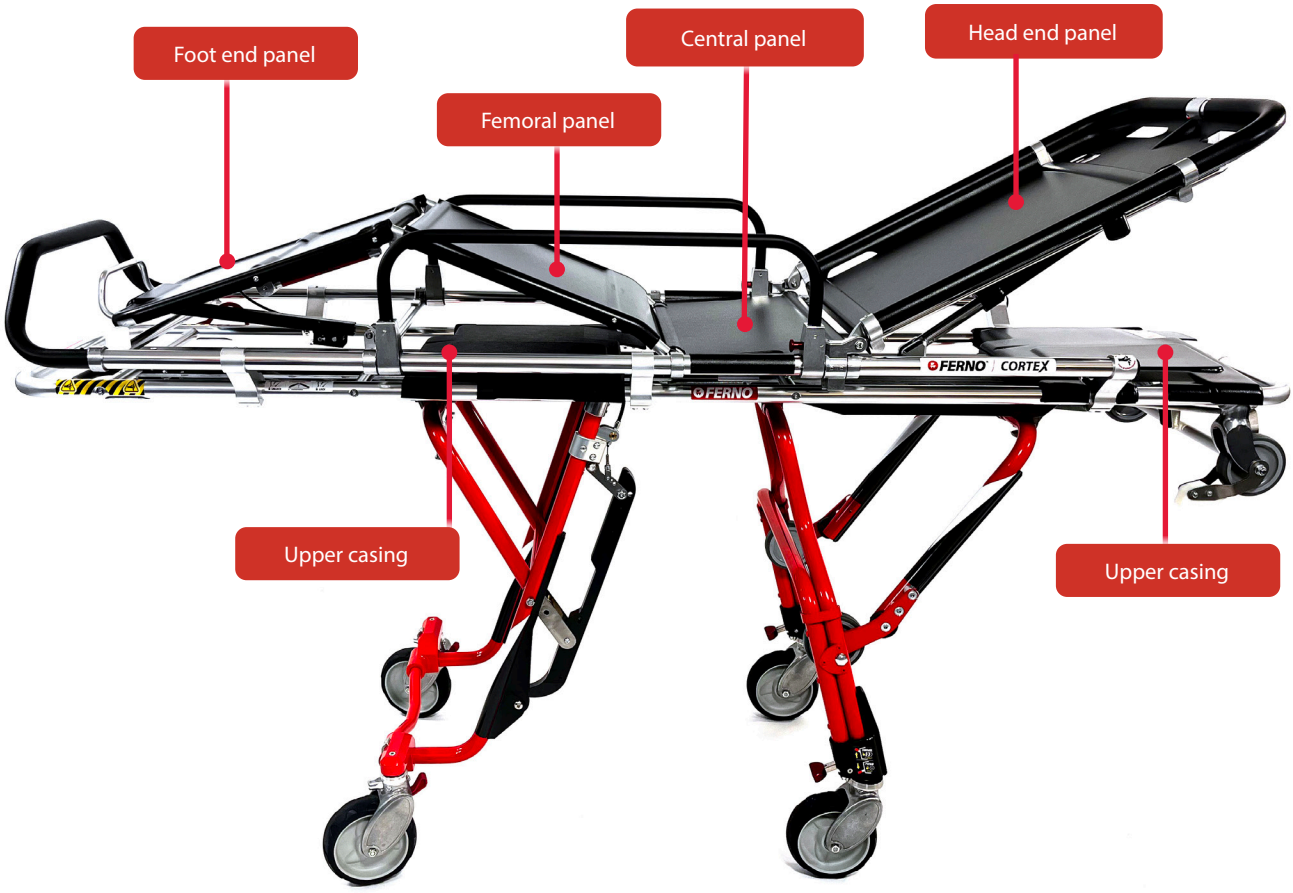


Figure 50 - Panels and casings

11.1 Spare parts assembly

WARNING

Spare parts not mentioned in this section should be replaced by Ferno authorised personnel.
If these parts are replaced or repaired by non-authorised Ferno personnel, any warranty from the parent company will be invalidated.

ABS PANEL, BODY

1. Remove the panel to be replaced by prying it up and releasing it from the backrest frame.

2. Fit the new interlocking panel onto the frame, applying light pressure to ensure it remains secure.

ABS PANEL, PELVIS

1. Remove the panel to be replaced by prying it up and releasing it from the seat frame.

2. Fit the new interlocking panel onto the frame, applying light pressure to ensure it remains secure.

ABS PANEL, FEMORAL

1. Remove the panel to be replaced by prying it up and releasing it from the anti-shock frame.

2. Fit the new interlocking panel onto the frame, applying light pressure to ensure it remains secure.

ABS PANEL, FEET

1. Remove the panel to be replaced by prying it up and releasing it from the anti-shock frame.

2. Fit the new interlocking panel onto the frame, applying light pressure to ensure it remains secure.

ABS UPPER CASING

1. Remove the panel to be replaced by prying it up and releasing it from the main frame.

2. Fit the new interlocking panel onto the frame, applying light pressure to ensure it remains secure.

12 - WARRANTY

12.1 Warranty terms and conditions

Ferno's products are guaranteed against manufacturing defects for a period of 24 months from the date on the Ferno s.r.l. shipping document.

Ferno guarantees its spare parts and reconditioned devices for a period of 12 months unless otherwise stated.

During the warranty period, Ferno will repair and/or replace any parts found to have manufacturing defects free of charge, excluding the costs of labour, travel, transport, and packaging.

The warranty does not cover consumables or parts subject to wear and tear due to normal use of the product, all parts typically subjected to sliding or rolling friction (bearings, brushes, shoes, tracks, etc.), parts potentially exposed to oxidation or corrosion (copper or metal alloy contacts, mechanical equipment).

On new devices, the surface finishes (gelcoat/resin, paint, powder paint, decals, tape, inscriptions, etc.) are guaranteed for 90 days.

Repairs are performed by trained technical staff at the Ferno s.r.l. site in Via Zallone 26- 40066 Pieve di Cento (BO), Italy or at the Customer's premises if suitable arrangements with Ferno s.r.l.'s Customer Service have been made.

Technical support at the Customer's premises must be arranged beforehand and involves a refund of costs incurred and documented on request.

For information on the costs of technical support, please contact the relevant department at Ferno s.r.l..

Repairs are guaranteed for 6 months from the date of repair. This warranty applies only when the product is used according to the instructions in the user manual provided. Misuse and negligence invalidate this warranty.

The warranty is valid from the day the product is shipped from Ferno s.r.l., and the shipping costs are not covered by this warranty. Ferno s.r.l. is not liable for damages incurred during shipment or due to misuse of the product.

Products sold by Ferno s.r.l. that do not bear the Ferno trademark are covered by the warranty of the original manufacturer. Ferno s.r.l. does not extend the warranty periods of other manufacturers; Ferno s.r.l. assumes no responsibility for products manufactured by others.

The warranty is rendered null and void in the case of:

– failure to observe the operating instructions,

– misuse,

– inappropriate use or handling,

– intervention on critical parts (not included in the list of section *Spare Parts List*) performed by unauthorised personnel,

– damage during transport due to improper packaging of items returned by the user,

– failure to perform periodic maintenance or preventive checks (see definitions in section *Maintenance*),

– failure to use original spare parts.

In cases not covered by the warranty, Ferno will not cover the transport costs for sending or returning the product.

12.2 Limitation of liability

If a product is found to be defective, Ferno s.r.l. will repair, replace it, or refund the purchase price. Under no circumstances can Ferno s.r.l. be held liable for more than the selling price of the product. The buyer accepts these conditions for all types of damage. Ferno s.r.l. does not offer other warranties, either express or implied, or any implied warranties of saleability or fitness for a particular purpose for its own products, or those manufactured by others.

In case of infringement of the limited warranty, any legal actions must be filed within one year from the date on which the infringement was, or should have been, discovered. Ferno s.r.l. reserves the right to terminate the warranty of the products sold:

- if the labels or plates bearing the Manufacturer's logo and/or the serial or registration number are rendered illegible or removed;

- in the event that the product has undergone modifications, repairs and/or workmanship not authorised by Ferno, with the exception of the components and non-critical parts listed in section "*Spare Parts List*" and installed correctly as per the instructions for use;

- if the product is not used in compliance with the instructions, and/or used for purposes other than those for which it was designed;

- further to the conditions indicated in section "*Warranty Terms and Conditions*".

Ferno s.r.l. cannot, in any event, be held liable for direct or indirect damage due to usage that is non-compliant with the instructions in the user manual or the intended purpose of the product.

12.3 Warranty claims

Contact Ferno's Customer Service immediately if you receive a product that is suspected to be defective. An agent will assist the customer through the complaints procedure. Before returning a product to Ferno s.r.l., contact Ferno's Customer Service to request authorisation.

12.4 Complaints

Any complaints must be communicated to the reseller, or to Ferno s.r.l.'s Customer Service, within 5 days of receipt of the product or of discovery of the alleged defect.

Claims or disputes regarding a single product shall not release the buyer from the obligation to collect and pay for other products in the order, unless otherwise agreed with the seller.

12.5 Return authorisation

No return will be accepted without the prior approval of Ferno s.r.l..

Products returned for business reasons, or for reasons not relating to nonconformity, will be accepted only after verification of their condition by Ferno s.r.l.'s qualified personnel.

13 - TECHNICAL SUPPORT

13.1 Technical Support Service

For technical support concerning our products, contact the Ferno Technical Support Service.

Telephone (toll-free for Italy)	800 501 711
Phone	0039 0516860028
Fax	(+39) 0516861508
Website	www.ferno.it

For information on the use of the stretcher, and to schedule training courses on its correct use, contact the Ferno's Customer Service.

⚠ WARNING

Non-original spare parts and inadequate repairs may cause damage and/or injury. Use only original Ferno spare parts and refer exclusively to Ferno Customer Support.

⚠ WARNING

Unauthorised modifications of the stretcher could cause serious damage, injury and/or unforeseeable operating problems. Do not modify or alter the stretcher in any way.

TRAINING RECORD		
Date	**Instructor Name**	**Training Type**

RECORDING OF PREVENTIVE INSPECTIONS		
Date	**Type of inspection**	**Technical**

TRAINING RECORD		
Date	**Instructor Name**	**Training Type**

RECORDING OF PREVENTIVE INSPECTIONS		
Date	**Type of inspection**	**Technical**

TRAINING RECORD		
Date	**Instructor Name**	**Training Type**

RECORDING OF PREVENTIVE INSPECTIONS		
Date	**Type of inspection**	**Technical**

Product User and Maintenance Manual, required to operate the product safely, maintain its efficiency and reliability, and comply with the terms of the warranty.

Rel. 20250225 English

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